

REMARKS

I. Specification and Drawings

The Examiner has objected to the drawings under 37 C.F.R. § 1.83(a), concluding that the “tension cable,” “tension cable wire end,” and “tension cable sleeve end” must be shown or the feature(s) canceled from the claim(s). While these features did not have reference numbers in the originally filed drawings, each one of these features is particularly illustrated in Figure 12 and disclosed by the specification. Therefore, to ensure that the illustrated features are specifically identified by the specification, reference numbers have been assigned to these features and added to the specification and Figure 12.

It is believed that the drawings as formally filed with this amendment are in acceptable form because the drawings show every feature of the invention specified in the claims. The addition of the reference numbers to Figure 12 and the specification is not new matter because the features are shown in the originally filed illustrations and are described in the specification. Accordingly, Applicant respectfully submits that the objections to the drawings have been obviated and should now be withdrawn.

II. Claim Rejections under 35 U.S.C. § 112

The Examiner has rejected Claim Nos. 14 and 15 under 35 U.S.C. 112, second paragraph, as being indefinite because “said shaft” in Claim Nos. 14 and 15 lacks antecedent basis because Claim No. 1 is not limited to a shaft. Instead, the shaft element is set forth in Claim No. 13, and Claim Nos. 14 and 15 have now been amended to properly depend from Claim No. 13.

Accordingly, Applicant submits that the rejections of Claim Nos. 14 and 15 under 35 U.S.C. §112 have been obviated and should now be withdrawn.

III. Claim Rejections under 35 U.S.C. § 103

The Examiner has rejected Claims Nos. 1, 5-12, and 16 under 35 U.S.C. §103(a) as being unpatentable over the French Patent FR2,522,511 (“the ‘511 patent). Applicant respectfully traverses these rejections as improper because a *prima facie* case of obviousness has not been made. The Examiner concedes that the ‘511 patent fails to teach a collar adapted to anchor a tension cable sleeve end. However, without citing any prior art which suggests a collar could be added to the prior art reference or setting forth the knowledge generally available to one of ordinary skill in the art which would motivate a person to make such a combination, the Examiner concludes that it would have been obvious for a person of ordinary skill in the art to combine the disclosure of the ‘511 patent with a collar that is adapted to anchor a tension cable sleeve. As discussed below, Applicant submits that this conclusion is not based on the prior art, including generally available knowledge, but is instead based on a hindsight reconstruction of the ‘511 patent based on the teachings of the present invention.

In 1966, the Supreme Court set for the factual inquiries required to determine obviousness. *Graham v. John Deere*, 383 U.S. 1 (1966). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there

must be a reasonable expectation of success. Finally, the combined prior art references must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in the disclosure of the present invention. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). The Examiner has failed to provide any support that the prior art references, or the knowledge generally available to one of ordinary skill in the art, provide any suggestion or motivation to modify the actuator of the '511 patent with any collar in the manner claimed by the present invention.

It should first be recognized that the '511 patent fails to disclose or suggest the use of a sheathed wire, such as a Bowden cable which has a wire core surrounded by an outer sheath. Instead, the '511 patent discloses an unsheathed wire, i.e., only a tension cable wire without a tension cable sleeve. Even if one assumes that a person of ordinary skill in the art changes the unsheathed wire to a sheathed wire in the '511 patent, there is no disclosure, motivation or other suggestion in the prior art, including generally available knowledge, to incorporate a collar for the sheath as it is particularly claimed, including the claimed elements and the claimed relationships between the elements. It is questionable whether the idea to change the unsheathed wire to a sheathed wire is hindsight construction or is within the generally available knowledge, but it is clear that the present invention is being used for hindsight construction when it is concluded that a collar must be added to one of the lead screws.

As evidence of this hindsight construction, Applicant submits that there is nothing in the prior art which would suggest connecting a collar to one of the lead screws, and there is nothing

in the generally available knowledge which would motivate a person to select one of the lead screws instead of connecting the collar to the housing or the nut itself. In fact, by connecting the collar to one of the lead screws of the '511 patent's actuator as suggested by the Examiner while the seat is connected to the other lead screw, the '511 patent's actuator would not work as set forth in the presently claimed invention. In particular, merely connecting the collar to one of the lead screws fails to produce the cooperative relationship between the parts claimed in the present invention and would therefore fail to produce the same tensioning as claimed in the present invention. According to the claimed invention, the nut is "disposed to rotate within said housing" while the first lead screw is "disposed to translate in a first direction within said nut" and the second lead screw is "disposed to translate in a second direction within said nut" which results in "tensioning the cable by urging the tension cable wire end apart from the tension cable sleeve end." In comparison, one of the lead screws (16) in the '511 patent is stationary while the nut (13) and the other lead screw (17) translate relative to the housing. Therefore, if as the Examiner has concluded, the wire is anchored by the seat on one of the lead screws while the sleeve is anchored by the collar on the other lead screw, one of these lead screws is stationary and cannot have the same cooperative relationship with the nut as set forth in the claimed invention. Further, since either the seat or the collar would remain stationary with the stationary lead screw (16), the '511 patent's actuator fails to tension the cable by urging the tension cable wire end apart from the tension cable sleeve end.

As discussed above, merely incorporating a collar to the '511 patent's actuator fails to result in the presently claimed invention because the '511 patent fails to disclose or suggest the

relationships between the elements as claimed in the present invention. The '511 patent and other prior art not only fail to disclose any actuator with the claimed elements and the claimed relationship between the elements, they also fail to suggest an actuator for "tensioning the cable by urging the tension cable wire end apart from the tension cable sleeve end."

Applicant also submits that the '511 patent must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. M.P.E.P. § 2141.02, pg. 2100-120, citing W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). As discussed above, the '511 patent's actuator functions differently than the presently claimed invention and has different cooperative relationships between the elements. Accordingly, when viewed in its entirety, the '511 patent suggests an actuator that operates in a manner equivalent to a turnbuckle where increased tension in a wire is the result of two ends being brought closer together, i.e., the end of one screw (17) is being brought closer to the end of the other screw (16). In comparison, the present invention teaches increased tension in a wire by moving one end away from the other end. Therefore, even though it may be possible to modify the '511 patent's actuator according to the teachings of the present invention, it would be hindsight construction using the present invention to do so. Accordingly, for all of these reasons, applicant respectfully traverses the rejection of Claim Nos. 1, 5-12, and 16 and also submits that the new independent claims submitted, Claim Nos. 35, 40 and 43, are also allowable over the prior art of record.

If any one or more of the originally filed claims are again rejected, Applicant hereby submits that is the Examiner's responsibility to identify the knowledge that the Examiner has

merely inferred as generally available regarding tension cable actuators by those of ordinary skill in the art. Additionally, Applicant also submits that the rejections based on such unsupported statements of inferential knowledge are improper because they fail to make a *prima facie* case of obviousness.

Claim No. 7 has also been amended to particularly claim the cooperative relationship between housing and the nut, wherein the housing retains the nut from translation. In particular, this cooperative relationship is described and illustrated by the annular detent on the housing and the ring on the nut, wherein the ring is seated within the annular detent. Accordingly, Claim No. 7 describes another aspect of the present invention that is not disclosed or suggested by the prior art, and this claim provides further evidence that the cooperative relationships between the elements of the present invention are not suggested by the actuator disclosed by the '511 patent because the '511 patent teaches that the nut (13) should translate within the housing. Claim Nos. 38, 39, 41 and 44 also are directed to the cooperative relationship between housing and the nut in which the housing retains the nut from translation.

As particularly discussed in the specification, the cooperative relationships of the elements in the present invention prevent rotation of the translating screws, resulting in no rotation of the inner wire and the outer sheath (see first full paragraph on page 11), and prevent translation of the rotating collar (see first full paragraph on page 6). If, as discussed above, the teachings of the present invention were used to rearrange the elements in the '511 patent's actuator, it would not necessarily require attaching the collar for the sheath to one of the lead screws. Therefore, this is yet additional evidence that hindsight construction was used to apply

the actuator elements from the '511 patent to the presently claimed invention because the elements themselves are arranged differently. As discussed above, when the '511 patent is considered in its entirety, including the fact that its cooperative relationships lead away from the claimed invention, it is clear that the '511 patent teaches away from the cooperative relationships in the presently claimed invention and would not suggest to a person of ordinary skill in the art that the '511 patent's actuator could possibly be used with a sheathed cable. Therefore, the unsupported conclusion that it would have been obvious to add a collar to the '511 patent is flawed and incorrect because the '511 patent not only fails to suggest being used with a sheathed cable, it teaches away from using a sheathed cable. Accordingly, Applicant submits that the '511 patent fails to suggest adding a collar for a sheathed because the '511 patent teaches away from using a sheathed cable in the first instance, and Applicant further submits that the unsupported conclusion regarding the collar fails to make a *prima facie* case of obviousness.

As discussed above, the present invention teaches increased tension in a sheathed cable by moving the end of the wire away from the end of the sheath rather than a simple turnbuckle configuration where two ends are being brought together. Therefore, instead of the unsupported conclusion that it would have been obvious to add a collar to one of the screws in the '511 patent, the present invention might suggest connecting the collar to the housing while the telescoping effect of the screws acts on the inner wire core. Accordingly, Claim No. 40 is directed to the cooperative relationships of three sets of threads as they operate to actuate a sheathed cable differently from a standard turnbuckle actuator, such as the actuator disclosed by the '511 patent.

Similarly, Claim No. 43 is directed to means that simultaneously move the cable sleeve collar and the cable wire seat in opposite directions.

IV. Allowable Subject Matter

The Examiner has concluded that Claim Nos. 2-4 and 13 are directed to allowable subject matter and that each one of these claims would be allowable if rewritten in independent form, including all of the limitations of the base claim and any intervening claims. Each one of these claims directly depends from Claim No. 1 without any intervening claim and would be allowable in independent form by incorporating the limitations from Claim No. 1. Therefore, as the logical corollary to the Examiner's conclusion, Applicant submits that Claim No. 1 would be allowable by including any one of the limitations from these dependent claims.

Applicant has added new Claim Nos. 35 and 44 which incorporate all of the elements from Claim No. 1 as originally filed as well as the allowable subject matter from at least one of Claim Nos. 2, 3 and 13. Accordingly, Applicant submits that Claim No. 35 and its dependent claims and Claim No. 44 are presented in a condition for allowance. The combination of this allowable subject matter with the subject matter of Claim No. 1 does not limit the equivalents of any one of the elements in the combined claims. Therefore, any combination of threaded devices, including one or more nuts combined with one or more screws, which have the claimed cooperative relationships may be equivalent to the presently claimed invention.

V. Conclusion

Applicants respectfully submit that the independent claims are allowable over the prior art of record, including the '511 patent. For similar reasons, and for the additional reasons set forth above, Applicant submits that the dependent claims are also allowable.

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment is respectfully requested.

Respectfully submitted,



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